THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

_____

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

_____

Ex parte YOSHIMITSU KUMAGAI

_____

Appeal No. 97-2611
Application 08/299,101[1]

_____

HEARD: July 14, 1999

_____

Before CALVERT, FRANKFORT and SCHAFER, Administrative Patent Judges.

CALVERT, Administrative Patent Judge.

_____

[1] Application for patent filed September 2, 1994.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 to 4, 6, 10 and 11, all the claims remaining in the application.

The appealed claims are drawn to a ground terminal, and are reproduced in the appendix of appellant's brief.

The references applied in the final rejection are:

Hosking	2,179,575	Nov. 14, 1939
Mroz	2,778,399	Jan. 22, 1957
Spencer et al. (Spencer)	4,470,649	Sept. 11, 1984

Appellant's Figures 1 to 4

Claims 1 to 4, 6, 10 and 11 stand finally rejected under 35 U.S.C. § 103(a) as unpatentable over the admitted prior art, as shown in appellant's Figures 1 to 4,[2] in view of either Mroz or Hosking, together with Spencer.

[2] Pursuant to the Manual of Patent Examining Procedure § 608.02(g), appellant should designate Figs. 1 to 4 by the legend "Prior Art."

The basis of the rejection is set forth on page 3 of the examiner's answer as follows:

> The admitted prior art discloses ground terminal 2 having a screw insertion hole 2e and leads 2b,c,d. Mroz and Hosking (Figure 10) show a metal element having a screw insertion hole and projections on a peripheral edge of the hole. It thus would have been obvious to provide the admitted prior art terminal with projections on the peripheral edge of its hole, as taught by either Mroz or Hosking, to make better engagement with chassis 3.
>
> Spencer et al discloses leads 72 having obliquely slanted sides, and to provide the terminal body of the ground terminal with obliquely slanted edges thus would have been obvious, to prevent damage to the circuit board.
>
> Alternatively, note that instant Figure 3 also shows the terminal body as having an obliquely extending surface at the extreme upper right. To form the terminal body with an obliquely extending surface at the left side as well thus would have been an obvious matter of design, to achieve the same benefits as the one at the upper right, namely, the elimination of a square corner where stress concentrations occur.

Since both of the independent claims, 1 and 6, and therefore all of the claims, call for the terminal body to

have "opposite edges each having a lead-side end which obliquely extends in a direction away from a corresponding one of said plurality of leads at said boundary portion to form an obtuse angle between said lead-side end of the terminal body and said corresponding one lead," we will first consider the question of whether it would have been obvious to provide the admitted prior art terminal body with this feature. As noted above, the examiner cites Spencer as evidence of obviousness, since Spencer

discloses terminal bodies (leads) 72 having tapered portions 74. However, each of the Spencer leads is to be inserted into a spring insert B in socket A which is positioned in a hole through a circuit board C, and the taper 74 is at an angle to match the angle of beveled surfaces 30, 50 on the socket and insert, respectively, in order to "provide[] a surface area for electrical contact between the leads and the socket" (col. 5, lines 12 to 16). By contrast, in the admitted prior art structure there would be no reason to taper the leads and/or terminal body for the purpose disclosed by Spencer, because

leads 2b, c, d are not disclosed as being inserted into sockets, but only into holes 1a through circuit board 1. We therefore do not consider that one of ordinary skill would derive from Spencer's disclosure any suggestion or motivation to form the ends of the opposite edges of the admitted prior art terminal body at an obtuse angle, as claimed, since the reason disclosed by Spencer for doing so would not be present in the admitted prior art terminal structure.

We further note that even if the admitted prior art terminal body or leads were tapered as disclosed by Spencer, the Spencer tapers 74 are positioned mostly below the top surface

of the board C, rather than being located in their entirety above the planar surface of the printed board, as recited in claims 1 and 6.

The examiner's above-quoted alternative basis for holding that the claimed obtuse angle would have been obvious, i.e., to match the obliquely extending surface at the upper right of appellant's Figure 3, is not well taken. In this

regard we agree with appellant's arguments at page 3, line 18, to page 4, line 10, of the reply brief.

Accordingly, we conclude that, on the present record, it would not have been obvious to modify the lead-side ends of the opposite edges of the terminal body of the admitted prior art apparatus to extend obliquely in the manner defined in claims 1 and 6 (and therefore also required by dependent claims 2 to 4, 10 and 11). In view of this conclusion, it is unnecessary to decide whether it would also have been obvious to provide such apparatus with a plurality of projections, as recited in all of the appealed claims except claim 6.

Conclusion

The examiner's decision to reject claims 1 to 4, 6, 10 and 11 is reversed.

REVERSED

IAN A. CALVERT Administrative Patent Judge	)	
CHARLES E. FRANKFORT Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
RICHARD E. SCHAFER Administrative Patent Judge	)	

IAC:psb

Birch Stewart Kolasch & Birch
P.O. Box 747
Falls Church, VA 22040-0747